stellate head; capsules with a distinct crown of bristles at the apex.....*O. stellata*

1b. Branches distinctly winged; leaves subsessile; calyx-tube glabrous; intersepalar emergences terminated by a bristle, stellate head absent; capsules without a crown of bristles at the apex. .....*O. arunkumarensis* sp. nov.

Note. Hansen (Ginkgoana, 4 : 28. 1977), merged the following taxa and kept them as synonym under *O. stellata* var. *rostrata* (D. Don) Hansen. These are : *O. campestris* Ham. *ex* Wall., Num. List. Pl. 143, No. 4063. 1831 (*nom. nud.*) — *O. nulchella* Benth. *ex* Wall., Num. List. Pl. 143, No. 4059 (*nom. nud.*) — *Ceramicalyx pulchellus* Blume, Mus. Bot. Lugduno — Batavum 1 : 50. 1849 (Type material : Wallich 4059 B) — *O. rostrata* var. *pulchella* Triana, Trans. Linn. Soc. London 29 :54. 1972 (*nom. nud.*)

We had the opportunity to examine all the types for the plants referred to above. A critical study support Hansen (1977) in his reduction of *O. pulchella* Benth. *ex* Wall. Num. List. Pl. 143, No. 4059. 1831 (*nom. nud.*) and *C. pulchellus* Blume, Wallich 4059B to *O. stellata* var. *rostrata* (D. Don.) Hansen. But *O. campestris* Ham. *ex* Wall., Num. List Pl. 143, No. 4063. 1831 (*nom. nud.*) is specifically distinct and can be easily distinguished as mentioned earlier.

This beautiful species is named in honour of Professor Arun Kumar Sharma, University of Calcutta, for the contribution he has made in the field of cyto-taxonomic studies of Indian plants.

NEW SPECIES OF *PSYCHOTRIA* (RUBIACEAE) FROM INDIAN SUBCONTINENT[1]

D. B. Deb and M. Gangopadhyay[2]

(*With three text-figures*)

Three new species of *Psychotria* (Rubiaceae) from the Oriental Region namely, *Psychotria burmanica* sp. nov., *P. meeboldii* sp. nov., and *P. russellii* sp. nov. are described with illustrations.

Three of the novelties discovered in the course of taxonomic revision of *Psychotria* for the revised *Flora of India* are described below:

1. **Psychotria burmanica** sp. nov. (Fig.1)

differt a *P. symplocifolia* Kurz habitu parva-arbore, foliis magnis, stipulis oblongis, obtusis, corollis fauce confertim lanuginosis fructibusque angustioris inter alia.

Type. Burma, Tavoy, Head waters of Sedi chung, 3000 ft. (900 m), 15.5.1920, *P. T. Russell* 1806 (in flower) A — holotype CAL, B — isotype CAL; Head waters of Sedi chung, 3000 ft (900 m), 1.6.1920, *P. T. Russell* 1832 (A,B,C in fruit, D. sterile — paratypes) CAL; Heinze no. 1 camp, 1700 ft (510 m), 18.4.1921, *P. T. Russell* 2027 A,B,C (in flower) paratypes CAL.

Trees small. Branchlets quadrangular when young, glabrous, striated, 0.3 — 1 cm in diam. *Leaves* 15 — 27 × 3 — 6 cm, petiolate, obovate or oblanceolate, acuminate, prominently incurved at margin, attenuate, coriaceous, glabrous, green to olive-green when dry; midrib stout, lateral nerves 10 — 16 on either side, subopposite, slender, arcuate, bacterial glands

[1] Accepted October 1983.

[2] Botanical Survey of India, Howrah-711 103.

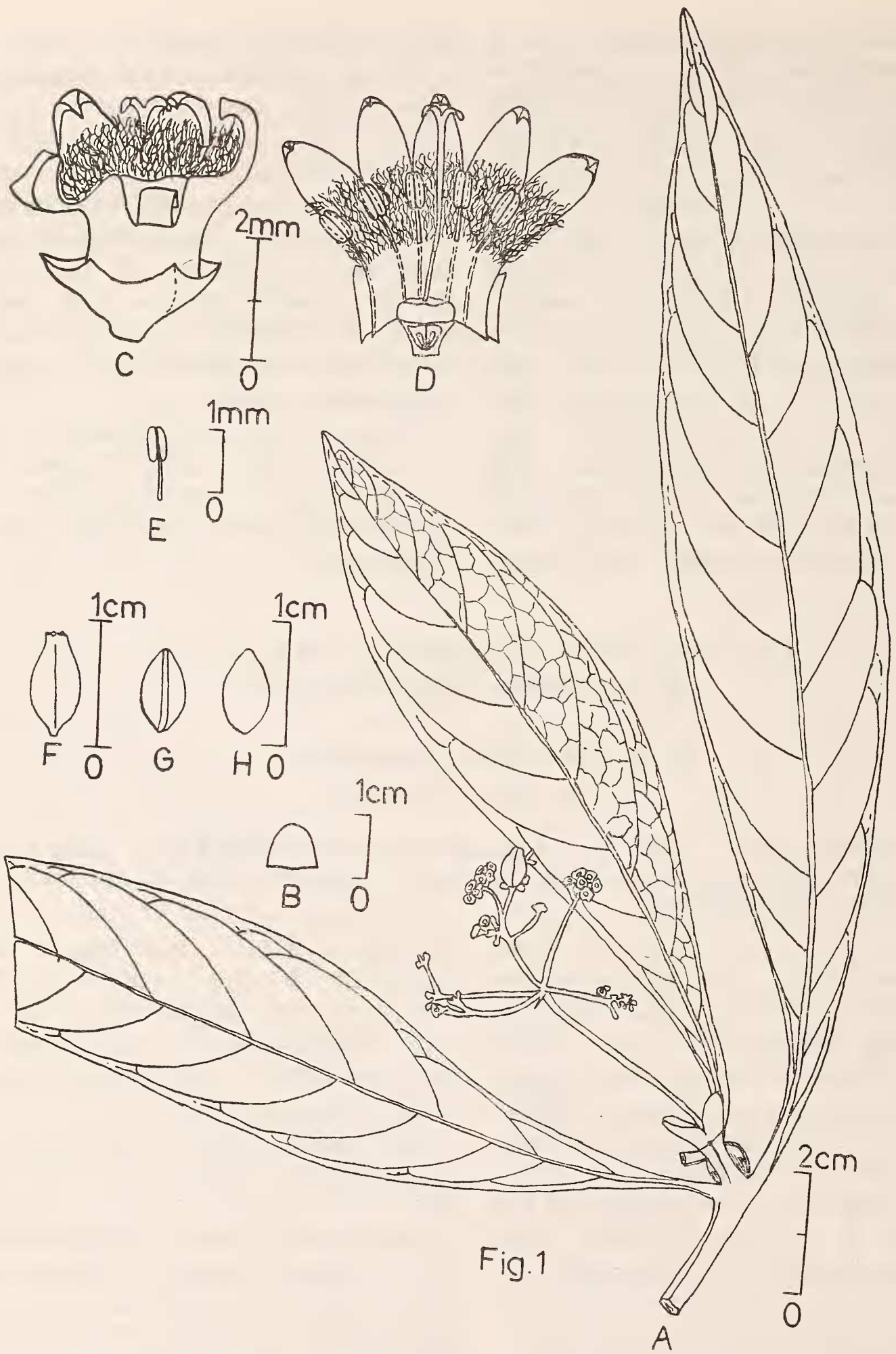

Fig. 1. *Psychotria burmanica* sp. nov. A. Habit, B. Stipules, C. Flower, D. Opened flower, E. Stamen (dorsal view), F. Fruit, G. Seed (dorsal view), H. Seed (ventral view).

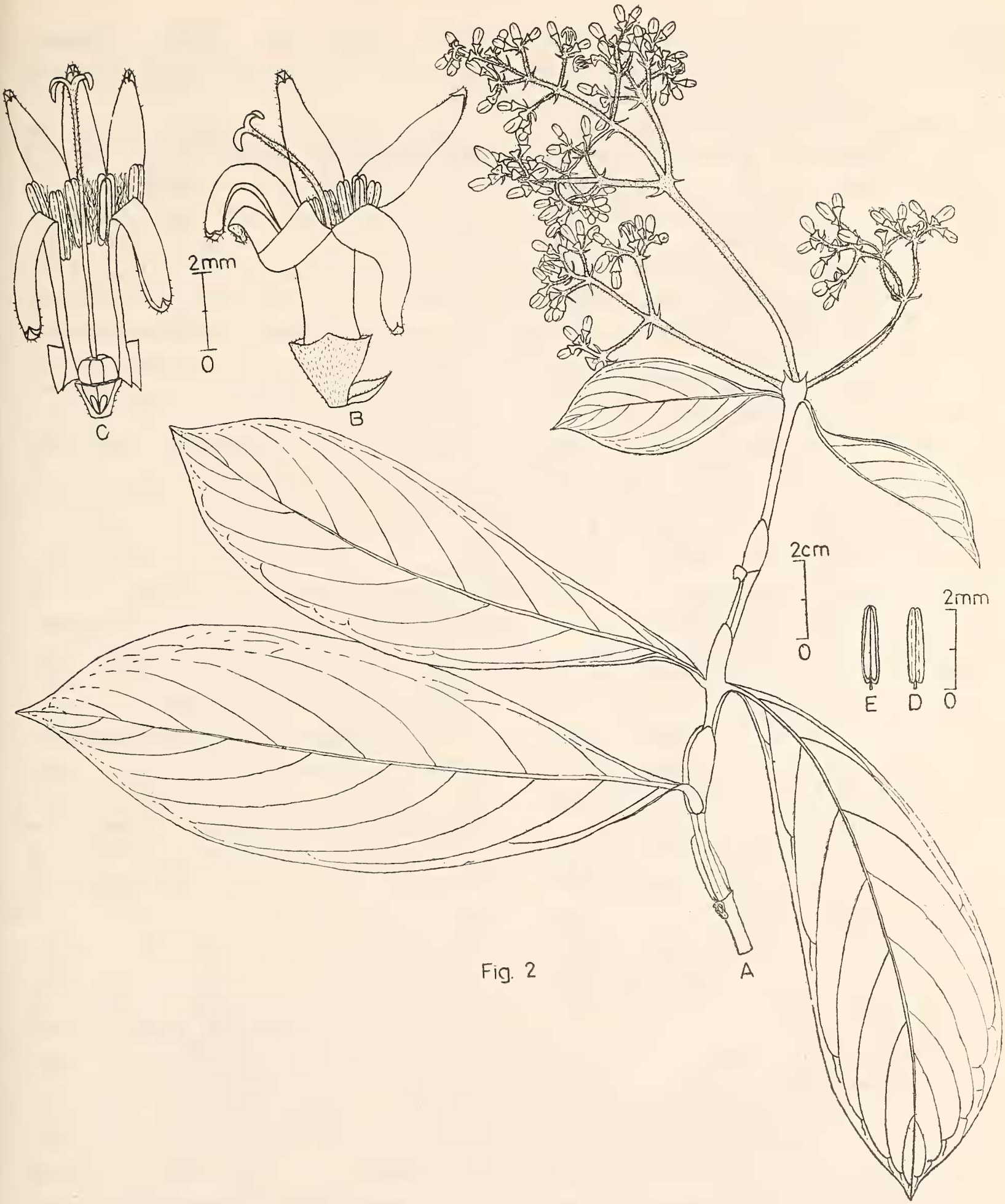

Fig. 2

Fig. 2. *Psychotria meeboldii* sp. nov. A. Habit, B. Flower, C. Opened flower, D. Stamen (ventral view), E. Stamen (dorsal view).

sometimes perforate the axil; nervules reticulate, petioles 1 — 3.5 cm, stout terete; stipules 4 — 6 × 5 — 6 mm, oblong, obtuse or retuse, coriaceous, glabrous above, ferruginous villous beneath. *Inflorescence* peduncled, terminal corymbose heads, 2 — 7 × 2 — 3.5 cm, branches 4 or 5, verticillate, branchlets short, terminating in heads; peduncles 1 — 3.5 cm, glabrous or puberulous; bracteoles 1 — 2 × 2 —3 mm, ovate or triangular, acute, entire or toothed, glabrous above, puberulous at the base beneath. *Flowers* 4 — 5 × 3 — 4 mm, sessile. *Hypanthium* about 0.5 mm long, glabrous. *Calyx* persistent, about 1 × 2 — 3 mm, cupular, with short triangular teeth, glabrous. *Corolla* tube about 2 mm long, thin, glabrous above, densely woolly at the throat, conspicuously veined; lobes 5, 1.5 — 2 mm long, ovate, inflexed, glabrous. *Stamens* 5, inserted at the throat; filaments ± 0.5 mm long, narrow, adnate just below the throat, alternating with the corolla lobes; anthers ± 0.5 mm long, oblong, dorsifixed, dehiscent through the longitudinal slits. *Ovary* ± 0.5 mm, 2 celled, each with a solitary ovule; style ± 3 mm long, narrow, glabrous; stigma capitate, 2 lobed, papillose; disc annular, 0.5 — 1 mm across. *Fruits* sessile, ± 8 × 4 mm, ellipsoid, crowned with persistent calyx; pyrenes 2, thin walled with raphides, dorsally one ribbed. *Seeds* ± 6 × 3 mm, ellipsoid, acute at both ends, thin, dorsally solitary ribbed, ventrally flat; albumen uniform.

Flowering time. April — May.

Fruiting time. June — ?

Distribution. Burma, Tavoy.

2. **Psychotria meeboldii** sp. nov. (Fig. 2)

differt a *P. flavida* Talb. foliorum nervis lateralibus numero minoribus, floribus majoribus, calycibus pubescentibus, bracteolatis corollarum lobis puberulis, antheris majoribus, stylisque puberulis.

Type. Ceylon (Sri Lanka), Colombo, March 1905, *A. Meebold* 2323 (holotype) CAL.

Shrubs branching; branchlets 3 — 5 cm thick, compressed, glabrous. *Leaves* 14 — 17 × 4.5 — 5.5 cm, petiolate, obovate, acuminate, tapering towards the base, coriaceous, glabrous, pale green when dry; midrib prominent on both surfaces; lateral nerves 7 — 9 on either side, subopposite, inconspicuous above, arched towards the margin, with bacterial gland opening by a pore at the axil; nervules reticulate; petioles 5 — 8 mm, glabrous; stipules persistent, 5 — 6 × 15 — 18 mm, ovate-oblong, acute to acuminate, entire, connate at the base, membranous, glabrous above, loose ferruginous pubescent at the base beneath. *Inflorescence* terminal panicle of cymes, ± 13 × 11 cm, trichotomously branching, slender, puberulous; peduncle ± 5 cm long, slender, glabrous; bracts 2, foliaceous, 5 — 6 × 2.5 cm, obovate, acuminate, entire, cuneate, coriaceous, glabrous, pale green. *Flowers* in cymes, lax, middle one sessile, laterals pedicellate, 9 — 10 mm long, tubular, bracteolate; bracteoles 1 — 5 × 0.7 — 2 mm, ovate or lanceolate, caudate acuminate, entire or irregularly toothed, glabrous, puberulous at margin; pedicel 1 — 1.5 mm long, puberulous. *Hypanthium* about 1 mm long, puberulous above. *Calyx* cupular, 1 — 1.5 × 3 — 4 mm, minutely toothed, puberulous above, glabrous beneath, with a bracteole just below the calyx-tube. *Corolla* tube 3—4 mm long, puberulous above, gradually glabrous, throat woolly beneath; lobes 5, reflexed, 4 — 4.5 mm long, oblong, thick, keeled at the apex, puberulous above, glabrous beneath. *Stamens* 5, inserted; filament minute, adnate just below throat; anther ± 2 mm long; dorsifixed, linear-oblong, dehiscing longitudinally. *Ovary* two celled, with solitary ovule in each cell,

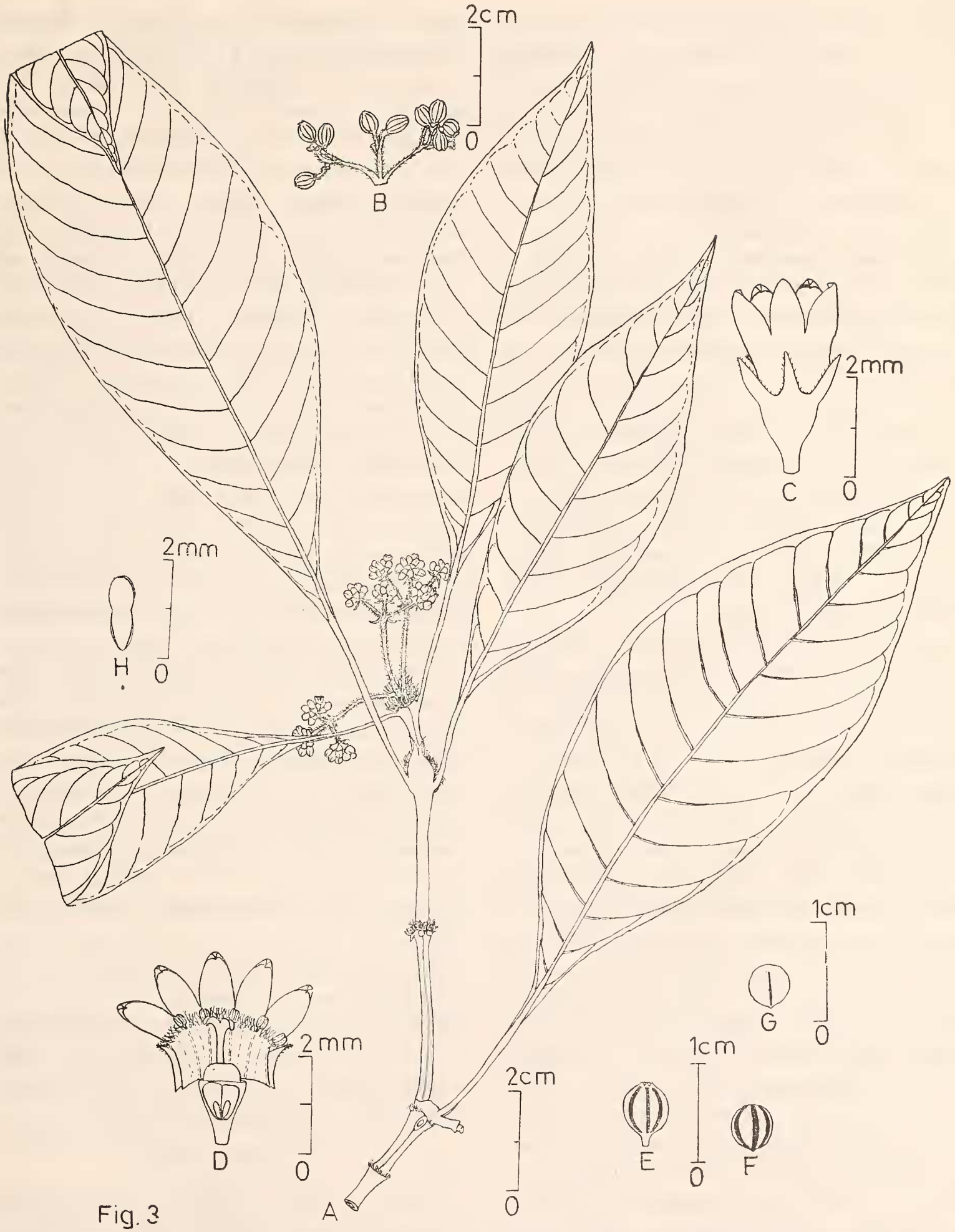

Fig. 3

Fig. 3. *Psychotria russellii* sp. nov. A. Habit, B. Inflorescence, C. Flower, D. Opened flower, E. Fruit, F. Seed (dorsal view), G. Seed (ventral view), H. Embryo.

basally attached; rephides present in the ovary and disc; style 5 — 7 mm long, gradually widening towards the apex, densely puberulous above, glabrous below; stigma 2 lobed, 1—1.5 mm long, oblong, obtuse, puberulous; disc subglobose, ribbed, grooved, 0.5 mm in diam.

Flowering time. March.

Distribution. Sri Lanka.

3. **Psychotria russellii** sp. nov. (Fig. 3)

differt a *P. monticola* Kurz foliis angustis ellipsoideis vel obovatis, capitulis angustioribus sed numero amplis, fructibusque globosis angustioribus.

Type. Burma, Tavoy, Heinze no. 1 camp, 1700 ft (510 m), 5.4.1921, *P. T. Russell* 1943 (in flower) A — holotype, B — isotype, CAL; ibid., 23.11.1921, *P. T. Russell* 2186 (in flower) paratype CAL; ibid., 28.4.1821, *P. T. Russell* 2077 (in flower) paratype, CAL; Tenasserim, March 1911, *A. Meebold* 14700 (in fruit) paratype CAL.

Shrubs branching; branchlets glabrous, smooth, 0.2 — 1 cm in diam., quadrangular when young. *Leaves* petiolate, slightly unequal in pair, 9 — 21 × 2 — 6 cm, elliptic or obovate, acuminate at the apex, slightly incurved, cuneate at the base, thin coriaceous, glabrous, punctate, green when dry; midrib slender, channelled above, lateral nerves 7 — 14 on either side, subopposite, subparallel, arcuate, slender, axil imperforate, nervules reticulate, inconspicuous; petioles 2 — 4.5 cm long, slender, glabrous; stipules 7 — 10 × 4 — 6 mm, ovate, two lobed, long acuminate, sometimes each lobe again divided into two irregular lobes, glabrous or densely irregularly ferruginous tomentose above, dense almost covering ferruginous tomentose sheath of hairs (colleters ?) beneath. *Inflorescence* terminal, trichotomous, umbellate heads; peduncles very short, ± 5 mm long, tomentose, branches and branchlets slender, tomentose; bracts deciduous, 4 — 6 × 1 — 3 mm, linear-lanceolate entire or irregularly shortly lobed, tomentose; bracteoles 2 — 4 × 1 — 2 mm, linear-lanceolate, entire or irregularly lobed at the base, tomentose beneath; heads 4 — 6 mm across. *Flowers* short tubular, subsessile; pedicel 0.5 mm long, glabrous. *Hypanthium* ± 0.5 mm, obovate, smooth. *Calyx* 1 — 1.5 × 2 — 2.5 mm; tube short, glabrous; lobes 5, ovate-lanceolate, ciliate at the margin. *Corolla* tube ± 1 mm long, glabrous above, loose villous at the throat beneath. *Stamens* 5, inserted; filament short, adnate to the throat, alternating with the petals; anther ± 0.5 mm, dorsifixed. *Ovary* two celled; style ± 1.5 mm long, stout; stigma capitate, 2 lobed, glabrous; disc subglobose, smooth. *Fruit* 4 — 5 × 4 — 4.5 mm, globose or ovoid, very short stalked, crowned with persistent calyx lobes, 6 ribbed and grooved; pericarp warty, thick. *Pyrenes* 2, ovoid, obtuse at the apex, acute at the base, plano-convex, dorsally 3 ribbed and 4 grooved, wall thin, with raphides. *Seeds* 4 — 4.5 × 4 mm, plano-convex, obtuse at the apex, shortly stalked at the base, dorsally 3 ribbed and 4 shallow grooved, ventrally flat with a shallow longitudinal furrow; albumen ruminated; embryo 1 — 1.5 mm long; axis 0.5 — 1 mm long, blunt at base, two side with shallow channel forming a wing like projection; cotyledons 2, 0.5 — 1 mm long, oblong, obtuse at the apex, thin, inconspicuously veined, radicle inferior.

Flowering time. March — April.

Fruiting time. November.

Distribution. Burma: Tavoy and Tenasserim.

Note. The specimens were tentatively determined as new by the collector P. T. Russell. The species is now named after him.

ACKNOWLEDGEMENT

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